

U.S. Department of Education World Wide Web Server Policy and Procedures

March 1, 1998

<http://www.ed.gov/internal/wwwstds.html>

(Last Modified August 8, 2001)

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Change Log

March 27, 2001

Added restrictions on characters to be used in file and directory names in Site Structure: File Names: Uniform Resource Locators (URLs).

February 16, 2001

Added references to new accessibility standards and ED/OCIO design requirements in Technical References. Changed OERI references to OCIO in various sections to reflect consolidation of ED webmaster functions in OCIO.

June 28, 2000

Updated contact names and telephone numbers in *Section VIII.D. Contacts.*

February 20, 2000

Updated contact names and telephone numbers in *Section VIII.D. Contacts.*

January 26, 2000

Updated contact names and telephone numbers in *Section VIII.D. Contacts.*

September 1, 1999

Updated contact names and telephone numbers in *Section VIII.D. Contacts.*

June 20, 1999

Updated contact names and telephone numbers in *Section VIII.D. Contacts.*

May 26, 1999

Updated cross-links within ED site for “News about Funding Opportunities” and “Funding Opportunities in Individual ED Offices and Programs” in *Section VIII.A. Technical Standards and Guidelines.*

March 20, 1999

Updated contact names and telephone numbers in Section VIII.D. Contacts.

January 8, 1999

Minor corrections to pages to reflect new disclaimer icon, link to new statistics page, and OERI address and phone number changes.

November 30, 1998

Updated address and telephone number in Section VI. Compliance Issues and at bottom of Table of Contents.

November 23, 1998

Updated contact names and telephone numbers in Section VIII.D. Contacts.

I. Background

This document establishes the procedures that the U.S. Department of Education (ED) will use to make information available on the World Wide Web (WWW). The ED Home Page is the entry point to the official document collection hosted on the ED-WWW Server, and originates at URL: <http://www.ed.gov/>.

Why this document is needed: The World Wide Web and related Internet technologies hold great potential for providing information to the public more quickly, extensively, and efficiently than has ever before been possible. The remarkable growth in the number of WWW servers, the amount of material they contain, and their use by the public make the Web an increasingly attractive and effective dissemination channel for federal agencies.

This same rapid growth also intensifies the need to establish standards and guidelines to help users find, retrieve, and use the information they need. If the growing number of Department-sponsored WWW servers is to coalesce and become a true “online library” for education, we need to learn some of the lessons traditional publishers and libraries have learned. From publishers, we need to learn the importance of consistent presentation and visual clues (i.e., look-and-feel, human factors). From libraries, we need to learn the importance of the universal uniform cataloging system and other resource sharing tools.

The federal government is making a major commitment to electronic networking as a primary means of providing information and services to customers. The WWW is a key enabling technology for the vision of “one-stop shopping.” If the dozens of Department-sponsored WWW servers follow a reasonable set of WWW standards and guidelines for the organization and presentation of information, customers could enter the system at any point and tap not only the specific server they first contact, but also the full resources of the entire interlinked system of which that server is a member component.

What this document is and is not: This document provides guidance to ensure high quality and consistent content, organization, and presentation of information on ED WWW servers, to help users find pertinent information to answer their education questions. At the same time, this document tries to avoid placing unnecessary constraints on the design and operation of individual servers and services. Every organization faces the special circumstances of its particular mission, goals, content, customers, technical capabilities, and organizational culture.

This document is not a training document. It is not a complete style guide for composing HTML (hypertext markup language), nor does it provide a complete checklist of procedures for project leaders to follow to publish information on ED WWW servers, although certain procedural issues are addressed. Specific Department technical standards and administrative guidance can be obtained through Attachment A: Technical Standards and Guidelines.

II. Definitions

Document

A document is a set of information designed and presented as an individual entity. A publication is a good example of a document. It may contain logical subunits such as parts, sections, or chapters; but it is typically created, updated, and presented as a single unit. The WWW presentation of a document may consist of one or many WWW pages.

Document Collection

A document collection is a set of documents that are logically related, usually by their content, target audience, or origin.

Page

A page, in WWW parlance, is an individual computer file which can be addressed by a hypertext link. Documents and collections are constructed of linked pages. Although most pages are static files, some are not. HTML forms, Common Gateway Interface (CGI) scripts, and other mechanisms may be used to create pages which are front-ends to databases or other types of information services. Such services may dynamically create new pages containing query responses or customized forms in response to user input.

Home Page

A home page is the entry point to a WWW server or a collection. It is the first page of information accessed by a visitor. Although the term "home page" is commonly used as a synonym for "WWW Server" or "document collection," in this document the terms are not equivalent.

WWW Server

A WWW Server is a computer that provides access to one or more collections of documents using World Wide Web formats and protocols. Each server has a main entry point or home page, although numerous files or pages are usually directly addressable.

III. Administrative Roles and Responsibilities

ED Webmaster

The ED Webmaster in the Office of the Chief Information Officer (OCIO) has the primary responsibility for administration of the ED-WWW Internet Server. The ED Webmaster acts in consultation with the ED Internet Working Group (IWG) which consists of individuals representing each ED Principal Operating Component (POC).

The ED Webmaster sets policy and standards for the Department's web presence and coordinates with each POC to ensure that documents posted to the ed.gov domain are approved for content and meet ED-WWW standards. This can include assigning liaisons on an as-needed basis to assist POCs in posting documents to the ED-WWW Server. Responsibilities also involve overall coordination of ED-WWW Server development and maintenance efforts, including but not limited to: Topics A-Z and other applications of metadata; site-wide and cross-site indexing; inclusion in general site-wide categories; and additions/changes to site-wide categories when dictated by new/changed content.

The ED Web Contractor is designated by the ED Webmaster to provide technical support for the ED-WWW Server. The ED Web Contractor maintains the files and directories on the ED-WWW Server; checks HTML validity/links; makes minor modifications to web pages to meet ED-WWW standards; and provides feedback to the originating office on the technical quality of web sites.

The ED Web Contractor can also provide markup, graphics, and design services under a Department-wide contract if a POC requires technical support. If a POC's requirements exceed the capacity of the Department-wide statement of work, services may be obtained under the contract's task order provision. (See Attachment A: Technical Standards and Guidelines for funding options/procedures.)

Principal Office

The principal office (also known as POC) within which an organization, program, or project falls has the primary responsibility for coordinating, reviewing, posting, and maintaining information in that POC's Web collection. Each Assistant Secretary is to ensure that web pages originating from his or her POC receive the proper reviews and approvals, and meet required technical standards. This will include designating:

- A POC Home Page Editor who will be responsible for compliance with all relevant Departmental WWW standards. Responsibilities will include but are not limited to: organizing a POC Home Page and the main navigational pages; ensuring coordinated procedures and a system of accountability for posting information to the ED-WWW; updating, archiving, or removing web pages; identifying valid links to other collections; and communicating with appropriate managers, stakeholders and customers about major document postings. The Home Page Editor can delegate authority to other individuals, depending on the needs of the POC.
- Web Publisher(s) who will assist in developing and posting pages for the ED- WWW. Web Publishers must work with the POC Home Page Editor to ensure the accuracy and quality of document collections. This can involve: identifying web documents; arranging for HTML markup of pages according to the Technical Standards and Guidelines; ensuring content integrity, accuracy, and timeliness of information; establishing a generic E-mail account; and responding promptly to customer inquiries.

IV. Content

Information on WWW servers operated by or directly representing Department offices is considered to be "ED-controlled." Information on WWW servers operated by or directly representing organizations or individuals under Department funding is considered to be "ED-sponsored." All other WWW information is considered to be "external."

To clarify the distinction, a WWW server operated by a contractor on behalf of a Department office is considered "ED-controlled" because to the public the server represents the voice of the Department, not the contractor. In contrast, a WWW server operated by a contractor as part of a clearinghouse or technical assistance contract from the Department would be considered "ED-sponsored" because the server is presented to the public primarily as the contractor's and only secondarily as the Department's.

IV.A. ED-Controlled Content

Statement of Purpose

The content of all pages on Department of Education WWW servers shall be related to the function and mission of the organization. Each organization, program, or project home page shall include, or link to, a specific statement describing the purpose and content of the document collection. This statement should be considered the "collection policy" for the WWW area of organization, program, or project. It can be used to determine whether a document or link should be included.

Approvals

Proposed WWW documents that contain material not previously approved must be cleared by the sponsoring POC, and if there are policy implications, by the ED Office of Public Affairs (OPA) before posting. WWW documents whose content matches or is a pure subset of a printed publication do not require additional Department clearance. Electronic versions of publications shall not be released to the public before the printed version has completed the clearance process; however electronic versions may be released before the printed version is available.

Each POC Home Page Editor shall be responsible for ensuring that all of the POC's web pages are approved for content before posting, meet the Technical Standards and Guidelines, and when appropriate, are coordinated with other ED offices. An advance notice process (not less than five days) shall be used to inform the ED Webmaster and any internal ED stakeholders about the content and timing of major documents to be published.

Responsible Party/Contact

Every document (or document collection) must have an E-mail address or link to an E-mail form, which can be used to contact a responsible party regarding the content of the page(s). The E-mail address will not necessarily be that of an ED employee and may be that of the Webmaster for the WWW server on which the document resides if no content expert can be identified. Organizations, programs, or projects must establish generic E-mail addresses authorized by the Department for their public points of contact, instead of using personal or corporate addresses (e.g., library@ed.gov rather than john_doe@ed.gov).

Accuracy

Complete accuracy for all online information is an important goal. However, the Department's current processes for information production and publishing do not always facilitate efficient production of electronic versions of documents suitable for online dissemination. In some cases, the need to make information available quickly or a lack of resources may not permit the extensive editing and proofreading necessary to ensure total, character-for-character correspondence between an electronic document and its printed counterpart. In such cases, the order of precedence for quality assurance efforts will be to: (1) ensure the accuracy of information on which users may base important decisions (e.g., grant application deadlines, policy guidance, etc.); (2) avoid inaccuracies which compromise

meaning (e.g., missing text, misaligned table cells, etc.); and (3) fix cosmetic flaws (e.g., titles not italicized, missing dashes, etc.).

HTML does not precisely mimic the printed page. The formatting adjustments which are required to present information in HTML are not considered to compromise accuracy if they faithfully convey the information in a document. Further, user-controlled browser preferences may also alter the document format. If the document format is important (such as retaining page numbers for reference purposes) documents should be provided in an additional format such as Adobe's Portable Document Format.

Timeliness/Currency

Effective customer service and the credibility of the Department depend on the timeliness and currency of information posted on the ED-WWW site. Information, particularly time-sensitive information such as announcements and press releases, must be posted as promptly as possible. POCs must ensure that all out-of-date information on the Web site is promptly removed, updated, or archived. It is recommended that dates be provided on web pages so users are aware of the currency. The party responsible for the document or collection should determine whether to retain an electronic version corresponding to the outdated version.

When the information in an online version of a publication becomes outdated, a dilemma arises: whether to update the information or remain faithful to the printed version. In some cases, the question is moot because the resources or expertise to update the information are not available. The information should be updated if: (1) the document is represented to users as a current resource rather than a historical artifact; and (2) the outdated information is factual and easily updated in the document without distorting other content. When a publication is modified, its title page or home page should include or link to a specific statement explaining and dating the modifications.

Embargo/Release

Information release must comply with any embargoes. Whenever possible, electronic release should be coordinated with release of printed publications so that press releases and other publicity can mention electronic availability and include the Uniform Resource Locator (URL).

Principal Office Home Pages

Each ED Principal Office shall maintain a home page and collection describing the organization and its activities. The POC home page shall include a pointer to the ED home page (<http://www.ed.gov/>) which is maintained by OCIO. The main ED-WWW server will link to each POC home page, which in turn will link to any home pages which may exist for its component organizational units and the programs and projects it administers. POCs shall retain ownership of and responsibility for their information content.

POCs shall use the central ED WWW server operated by the OCIO for ED information unless they have a compelling justification to use a different server (see exception policy under section on ED-controlled Servers). Exceptions require approval by the IWG.

Program and Project Home Pages

Program and project home pages and collections are optional but recommended. If created, they shall link to the sponsoring organization's home page, the program index maintained on the main ED WWW server, and any appropriate Departmental topical forums. Programs and projects shall use the main ED-WWW server or one of the shared servers operated by OCIO to host their WWW materials.

Staff and organizations interested in creating and posting program and project home pages must closely coordinate with the responsible POC to ensure that web sites are approved for content and comply with the Technical Standards and Guidelines. New documents that have policy implications must also receive OPA approval before posting.

Personal Home Pages

Personal home pages are not supported on the main ED WWW server or OCIO's shared servers.

ED-Controlled Servers

Internet services will be developed and maintained centrally by OCIO to meet the needs of principal offices. The purpose of centralized management of web servers is to ensure: adequate systems coverage and support; optimal customer service and cost control; adherence to Department quality control standards; increased security; and uniformity of presentation.

Individual POCs will not, in general, be free to purchase servers for agency documents or to convert existing servers for that purpose; however, sufficient flexibility shall exist to allow for limited predefined exceptions. The IWG will be responsible for implementation of an exceptions process, which will consider: (1) the business case put forward, such as criticality of the application or potential degradation of service; (2) public and private sector partnerships and interagency partnerships; and, (3) technical requirements for close integration with existing database application on other servers. Exceptions to the server policy must be approved by the IWG, and are subject to ongoing review by the responsible POC to ensure that web sites are approved for content and comply with the Technical Standards and Guidelines. This would include servers supported by ED-funded contractors and companies that provide direct support to ED operations by managing and maintaining information for a responsible POC.

IV.B. ED-Sponsored Content

Statement of Purpose

Information on WWW servers operated under Department funding shall be related to the purpose of the award under which the project is funded. The Department of Education shall be identified prominently and a link provided to the sponsoring POC home page. In the case of organizational servers where ED-sponsored information co-resides with other information, ED-sponsored information shall be clearly identified and distinguished from non ED-funded information.

Approvals

The individual or office responsible for the project (Project Monitor) shall be responsible for the coordination of all ED-sponsored pages. However, the sponsoring POC and the responsible Home Page Editor will decide how closely the site needs to be monitored to ensure that the content and technical integrity of ED-sponsored pages are consistent with Department WWW standards. The level of monitoring by the POC shall be determined by the following factors: how much material the site contains; the frequency and volume of updates; time-sensitive nature of updates; the contractor/grantee track record for responsibly managing the site; and the potential risks/burdens for ED.

Responsible Party

See IV.A.

Accuracy

See IV.A.

Timeliness/Currency

See IV.A.

IV.C. External Content

Approval

The decision to include a link to an external source should be based on the statement describing the purpose of the document collection (see IV.A.). The Office of the General Counsel has indicated that POCs may establish links to agencies, for-profit corporations, non-profit organizations, and other groups if the POC: (1) develops a policy to determine sites eligible for linking (for example, a business relationship must exist between the Department and the sponsor of the external web site); (2) specifies

parameters that linked sites must meet; (3) understands that sites meeting its requirements must be included; and (4) provides a prominent disclaimer(s) to visitors in various locations of the POC web site that linked sites are not endorsed or supported in any way by ED. The ED Webmaster reserves the right to approve or disapprove a request to link to non-ED sites in consultation with OGC (see IWG policy on establishing links to external organizations at <<http://www.ed.gov/internal/xtrnlink.html>>).

Context

In many instances, it may be necessary or appropriate to place external links in context for the user by including statements explaining the purpose of the link and disclaiming responsibility for or control over its content. It is important to avoid giving a user the impression that ED is endorsing a commercial product. It is also important to avoid giving the impression that ED is linking to frivolous (or worse) sites. Care should be taken when linking to external sites to ascertain that they do not themselves link to questionable or objectionable sites. Users cannot always easily tell when they are leaving ED “webspace” via an external link. All external links must be clearly identified as such.

V. Navigation/Organization

An important goal for ED's collective WWW services is to offer each user full access to the entire expanse of the distributed collection, regardless of the point at which the user enters the system. Reaching the goal of providing the convenience of "one-stop shopping" in a widely distributed system will require that each server sponsored by the Department, in addition to serving its own particular constituency, provide links to dozens of other ED servers. The main ED-WWW server is designed to:

- include links to each principal office document collection,
- accommodate cross-links among organizations, programs, and projects,
- highlight the Secretary's initiatives,
- provide a comprehensive catalog of the Department's publications and products,
- host a collection of links to ED-sponsored Internet sites and external education and library- related resources,
- sponsor topical forums consisting of discussion groups and collections of documents and resources on important educational subjects, and
- help users identify educational resources and services available to them by subject, role (teacher, parent, student, etc.) or geographical location (state or region).

ED-sponsored WWW materials must be coordinated with the main ED WWW server in any of the above areas that apply in order to ensure that users who access the main ED WWW server gain access to the complete range of ED's information and services.

In the near future, Internet technologies are expected to enable cross-server indexing and searching powerful enough to let users find information of interest across hundreds of educational WWW servers. For now, reciprocal links are required between each ED-controlled or ED-sponsored WWW server and the main ED WWW server at <http://www.ed.gov/>.

VI. Compliance Issues

Web Publishers in every office must coordinate with their POC Home Page Editor to ensure adherence to all required Departmental procedures and standards. In addition to the major compliance provisions addressed below, detailed technical and implementation issues are provided in Attachment A: Technical Standards and Guidelines.

Coordination

The POC Home Page Editor and Web Publishers will coordinate with OCIO, which maintains the main ED-WWW server, to ensure proper linkage when a new organization, program, or document collection is made available or substantial changes are made to an existing collection. For further information, please contact:

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kstubbs@inet.ed.gov

Quality Assurance

POC Home Page Editors (and Project Monitors) shall be responsible for the quality and functionality of their web pages. They will ensure that all documents are reviewed for quality and adherence to the Technical Standards and Guidelines before the documents are made publicly available, and that collections are spot-checked regularly.

Accessibility

To the extent possible, Web Publishers must ensure that all materials provided on the ED-WWW are accessible to users with disabilities, character-only, or low-bandwidth access. (See Attachment A: Technical Standards and Guidelines for detailed information.)

Security/Privacy

Operation of a WWW server and all associated web applications opens up numerous potential security issues that must be addressed. The ED Webmaster has primary responsibility for the server's security; however, Web Publishers must also realize that potential risks abound, and should be cognizant of security considerations when implementing interactive web applications and collecting user information.

Web applications such as CGI scripts, online forms, and other interactive applications can increase the security risk to ED. The use of cookies or other means to collect user information may also raise privacy concerns among users. Therefore, the ED Webmaster, Departmental Security and Privacy Act officials, and the POC Home Page Editor must be consulted with in advance to review and approve these sites. The purpose of this review is to ensure that information contained and transmitted via the ED-WWW Server will be secure, that all relevant Federal statutes are adhered to, and appropriate warnings, disclosures and/or disclaimers are openly displayed (see References for requirements and sample disclaimers).

Restricted Access

Sensitive, confidential, or private information should not be placed in publicly available directories. In some instances, there may be a need to place documents that are not officially public in a non-private directory for access by a geographically distributed workgroup, test group, or team. The POC is responsible for determining whether to password-protect the materials to prevent access by unauthorized individuals.

Copyright and Fair Use

A copyright is the “right” of an author or publisher to control the use of an original work that the author or publisher has produced. This “right” however, does not extend to works of the federal government, and therefore works created by U.S. Department of Education employees as part of their official duties are in the public domain. In addition to official records and documents of the government, other examples of work in the public domain include: works whose copyright has expired, been forfeited or abandoned and non-copyrightable works such as titles, names, short phrases or slogans. (Titles and phrases may be protected under trademark laws.) While not subject to the copyright laws, excerpts of government information should be accurately presented and cited.

Copyrighted material (e.g. newspaper articles, magazine articles, books, etc.) may be published on the Department's Web site only if the item's publisher first gives the Department permission to publish the item. A notice that the Department received reprint permission must accompany the item when it is published and must include the full name, address and telephone number of the publisher. (Sample notice: “Printed with permission from (name of paper), (full address), (telephone number).”

An author's copyright is not absolute however and the “fair use” doctrine allows copyrighted works to be used for purposes such as criticism, comment, news reporting, teaching, scholarship and research. Refer any questions about whether reprint permission is needed before posting a particular item on the Department's Web site to the Office of the General Counsel (401-6700).

Government Information Locator Service (GILS) Compliance

GILS is an information processing standard and comprehensive indexing scheme that is being created that will identify, describe and help find electronic and non-electronic Federal government information resources. Information sources and products on ED WWW servers will, when appropriate, have GILS records created for them. Contact OCIO for further guidance on GILS.

Usage Monitoring

Web Publishers should review and analyze the usage reports generated by the server for their documents and collections, and use this information to improve their services or marketing. Current and historical usage statistics for the main ED-WWW server are available at <http://www.ed.gov/internal/webstats/>. Summary statistics are retained for historical and analytical purposes. Information that identifies individuals (e.g., e-mail address, IP address) is not available to the public, and is deleted after 90 days.

The Web Evolves

Web Publishers are reminded that the WWW environment is changing rapidly. The number of servers and users is skyrocketing. New software, both commercial and freeware, for browsing, authoring, converting, serving, and searching becomes available every week. Web Publishers should, from time to time, evaluate the needs of their projects against the changing environment and make appropriate adjustments.

Reinventing the Wheel

Web Publishers are encouraged to explore the Internet to identify sites which might have already invented the wheel. They are also encouraged, when they create processes and procedures, to consider whether to generalize them for use in other situations at ED in the future. Web Publishers should consult the ED-WWW server and staff for advice on Web design, implementation, and maintenance, as well as Web-related tools and techniques.

Continuous Improvement

Web Publishers should take advantage of the “live” nature of WWW services and the steady stream of technical enhancements by continuously improving their services. While frivolous and arbitrary changes are distracting to users, improvements to services based on user feedback, new ideas for

organization, new HTML features, or newly available functionality will keep services fresh and give users a favorable impression of the Department's WWW commitment and expertise.

VII. References

Associated Statutes and Regulations

While proper use of the Web has great advantages for the Department and its principal offices, it also introduces many challenges in applying existing law and regulations to new ways of conducting business. While not an exhaustive list, the following statutes and issuances must be complied with in the collection, dissemination, access, preservation, and privacy of Government information resources:

- Americans with Disabilities Act of 1990 (42 U.S.C. 12101 note) and the Rehabilitation Act Amendments of 1992 (29 U.S.C.) 794) and GSA Regulation
- Computer Security Act of 1987 (40 U.S.C. 759 note)
- Copyright Act of 1976 (Title 17, United States Code, Sections 101-810) and Copyright Basics, Circular 1, Copyright Office, Library of Congress, Washington, DC, January 1991
- Establishment of Government Information Locator Service OMB Bulletin No. 95-01
- Federal Depository Library Program (44 U.S.C. Section 1902)
- Federal Records Act (44 U.S.C. Chapters 29, 31, 33, 35), National Archives and Records Administration Regulations (36 CFR Chapter 12, Subchapter B, "Records Management")
- Freedom of Information Act (5 U.S.C. 552)
- Information Technology Management Reform Act of 1996 (40 U.S.C. Chapter 25), Executive Order 13011
- OMB Circular A-130, "Management of Federal Information Resources"
- Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35), 61 CFR 6428 (February 20, 1996)
- Privacy Act (5 U.S.C. 552a)

Federal Agency Guidance and Principles

In addition to these regulatory requirements, OMB is encouraging federal agencies to use the Web in a manner consistent with the agency's mission, within the context of the agency's strategic and investment planning, in support of work processes that have been appropriately redesigned, and as a tool to augment existing information management practices and services delivery methods. These principles are interrelated, and deal with strategic planning, service delivery, information access and dissemination, information collection and privacy, and records management.

VIII. Attachments

VIII.A. Technical Standards and Guidelines

This is a supplement to the ED World Wide Web Policy and Procedures and provides the technical standards for documents posted on ED servers, with additional guidance on style and coding. Please send suggested revisions/additions to the ED Webmaster.

File Formats

The choice of file formats used should be based on the following considerations: (1) the intended use of the material by the target audience; (2) the accessibility of the format to the target audience; and (3) the level of effort required to convert the material to the format.

In the interest of making information readily available to as wide an audience as possible, ED WWW servers shall avoid making information available *only* in proprietary file formats (e.g., WordPerfect, Microsoft Word, PowerPoint, SAS, Adobe Acrobat Portable Document Format, etc.), except in cases where the target audience commonly has access to such formats. Links to files in proprietary or unusual formats will be explicitly noted.

Material intended to be viewed, read, or browsed online shall be prepared in HTML format (for text and tables) and GIF or JPEG (for images). GIF is recommended for graphics, line art and logos, while the JPEG format works best for photographic material where there is a need to preserve a large number of colors. In such cases, JPEG produces smaller files with minor loss of image precision. Progressive JPEGs, however, are not yet widely supported.

Portable document formats such as Adobe Acrobat PDF should not be used as the primary format unless converting the material to HTML is not feasible. Although it is easier in many instances to create PDF than HTML and PDF preserves page layout and formatting, there are drawbacks: the contents of PDF files are not included in some full-text search indexes; PDF viewers are not embedded in most Web browsers; PDF viewers require more powerful hardware for online viewing than a Web browser alone; and PDF files present accessibility problems.

Material intended to be downloaded for offline print or display shall be prepared in one of the following formats, which are listed in descending order of preference:

- 1) HTML and GIF or JPEG — Same as material for online viewing.
- 2) Adobe Acrobat (.PDF), Envoy (.EVY), or Common Ground Digital Paper (.DP) — Include link to downloadable free viewer.
- 3) Postscript (.PS) — Postscript produces excellent print quality but cannot be displayed on screen by most users and cannot be printed by many users with low-end printers.
- 4) Microsoft Rich Text Format (.RTF) — RTF is easily created from most word processors and is more widely usable than native word processor formats such as Microsoft Word or WordPerfect. However, its reproduction of fonts and page layout can vary depending on the user's font set.
- 5) Proprietary formats (e.g., WordPerfect, Microsoft Word, Excel, PowerPoint, Freelance, etc.) should only be used if: (a) conversion to one of the above formats is not feasible; (b) the intended audience is known to have ready access to software which can handle the proprietary format; or © the intended use is data analysis or manipulation (see below). If use of a proprietary format is unavoidable, use an earlier, more widely available version if possible (e.g., WordPerfect 5.1, not 6.1).

Material intended to be downloaded by the user for offline analysis or manipulation shall be prepared in one of the following formats, which are listed in descending order of preference:

- 1) Raw data files:

comma separated values, text in quotes
column formatted (mainframe data)
space delimited (purely numerical data)

2) Proprietary formats (SAS, SPSS, etc.)

Data files shall be accompanied with adequate documentation of the file content and structure in a widely usable format such as ASCII or PDF. Documentation for executable programs shall include instructions for installation and use, as well as specifications for the platform needed to run the package (i.e., memory, disk space, operating system, etc.).

If the material to be downloaded is large (i.e., larger than 500K), it should be compressed in ZIP format and accompanied by an uncompressed ASCII file which describes the contents of the compressed file and provides instructions for uncompressing it.

Self-extracting archive files shall not be used unless the contents of the package are only usable on one type of computing platform. Self-extracting program code only runs on one type of computing platform (e.g., IBM PC) and makes the contents of the self-extracting archive inaccessible to users of other types of machine (e.g., Mac, UNIX).

Material in formats other than HTML shall be linked to an HTML page which describes the material in such a way that users of site-wide full-text search facilities can find material of interest.

Site Structure

File Names: Uniform Resource Locators (URLs)

URL names should use simple, understandable words and be kept as short as possible without becoming cryptic. The intent is to use names which are easy to read, remember, and type.

The only characters used in file and directory names on the main ED server should be letters (A-Z, a-z), numbers (0-9), period (.), underscore (_), and hyphen (-). Do not use special characters such as ~ ! @ # \$ % ^ & * ; ? () < > { } [].

The index.html standard will be used wherever possible as the default entry point for a directory.

URL names should use lower case, except that upper case can be used to make long names more readable (e.g., /pubs/TeachersGuide/). Arbitrary use of upper case (e.g., picture.GIF, myFILE.html) is prohibited. The main ED server is case-sensitive in its treatment of file names, and myfile.html is not the same as MyFile.html. Strict attention should be paid to matching actual file names with the links that refer to them.

Page Length

(Adapted from Sun Microsystems Guide to Web Style)

Like the fold in a newspaper, the bottom edge of the browser window will stop some people from reading further. If a page is only as long as the default browser window, readers will see all that is presented in a glance—and won't have to guess what's below the edge.

Short well-written prose with interesting links seems to attract the biggest audience. Writing for the web is not the same as writing for print. Think shorter! As a general rule of thumb, make the majority of pages no longer than 1.5 screenfuls of text to please the majority of readers.

File Size

Page length and file size go hand in hand. Generally, pages should be composed of no more than 100K, including images. A better way to judge whether a file is too big is to test it using the connection method (14.4 or 28.8 modem, T-1 or T-3 line) that the majority of customers will be using. (Test

results will be affected by peak usage times and the capacity of the Internet Service Provider.) Estimated download times can be obtained from some HTML editors or the Bobby validation service. Many customers will wait no longer than 10-15 seconds for a page to display.

Large or complex documents intended for online viewing, typically those larger than 10 screens, should be divided into multiple, smaller files. If possible, files should be divided along logical break points such as chapters or sections. To assist users in navigating sectioned documents, each page should include standard navigation buttons at the bottom with links to the table of contents and previous and next section (see example below). The first and last sections of the document should omit the previous and next link respectively.

```
<A HREF="prevfile.html">[Title of Previous Section]
<IMG SRC="/icons/prev.gif" ALIGN=BOTTOM ALT="" WIDTH=31 HEIGHT=32></A>
<A HREF="index.html">
<IMG SRC="/icons/up.gif" ALIGN=BOTTOM ALT="[Table of Contents]" WIDTH=31
HEIGHT=32></A>
<A HREF="nextfile.html">
<IMG SRC="/icons/next.gif" ALIGN=BOTTOM ALT="" WIDTH=31 HEIGHT=32>[Title of
Next Section]</A>
```

When a document consists of more than ten files, either a PDF or a compressed file in ZIP format should be made available to allow users to easily download the whole document. PDF files should be accompanied by a link to the Adobe Acrobat PDF viewer download site. The following is the standard link:

```
<A HREF="http://www.adobe.com/prodindex/acrobat/readstep.html">Adobe Acrobat reader</A>
```

ZIP files should be accompanied by a link to a standard directory containing zip utility software and instructions for various computer platforms. The standard link is Zip Utility Software.

Publication Directories: Publications that consist of multiple files should have a directory of their own within the appropriate home page directory. The entry point for such documents should be a table of contents page (index.html) that lists and includes links to the title page, each chapter/section file, and in most cases a compressed or PDF file containing the entire document.

Site Directory Structure

To facilitate site management, the main ED web site organizes the thousands of files it hosts into a standard directory structure.

Information Type	Standard Directories
Publications	/pubs/ — a separate subdirectory for the HTML version of each publication /pubgifs/ — a separate GIF or JPG file for each publication cover /PDFDocs/ — one or more separate files for each publication; subdirectories as needed to group related sets of PDF files /ZipDocs/ — a separate file for each zip file; subdirectories as needed to group related sets of zip files
Offices	/offices/ — a separate subdirectory for each principal office, each with its own subdirectories as needed; directory name is upper-case office acronym /gen_ed_org/ — general organizational overview of ED, including brief office descriptions and senior staff bios and photos
President's and Secretary's Initiatives	/inits/ — a subdirectory for each initiative, each with its own subdirectories as needed
News and Events	/News/ — archive of "What's New" announcements for past months /Events/ — pages that announce events /Picks/ — archive of past "Picks of the Month" /Speeches/ — speeches and testimony by the Secretary and other senior officials /updates/ — Updates on Legislation, Budget, and Activities
Images and Icons	/icons/ — contains shared graphics such as the ED seal, navigational icons, office logos, etc.; subdirectories for special collections such as state flags
Legislation and Federal Register announcements	/legislation/ — a subdirectory for each legislative initiative /legislation/FedRegister/ — a subdirectory for each of four Federal Register document types
External Links to Other Sites	/EdRes/ — a page for each category of links in the main ED site's "Other Sites" collection
Comments	/comments/ — applications that solicit, collect, and display comments from outside customers
Internal Pages	/internal/ — web pages for use by ED staff rather than outside customers

Links

Relative URLs and Links Within ED Site

Relative URLs are to be used whenever possible, for both anchors and images, in order to make documents and collections portable within the ED site structure. At a minimum, relative URLs leave

out the protocol and domain name for the ED site (<http://www.ed.gov>); they may also leave out directory names when files are contained in the same directory. For example, a link from the file "index.html" to the file "chapter1.html," when both files reside on the WWW server "www.ed.gov" in the directory "/pubs/TeachersGuide/", should be expressed as:

not as

.

To Non-ED Sites

Links to pages outside the ED site will be absolute links; they will contain the entire URL for the outside page. For example:

External links will be identified in such a way that the average web traveler (not the beginner) will know he or she is leaving the ED information space. Pages whose focus is linking to external sites shall include or link to the text of the standard Disclaimer of Endorsement statement (see <http://www.ed.gov/disclaimers/endorse.html>) and a statement of the scope of the collection of external links and the criteria for inclusion. When external links appear on a page but are not its focus, the standard Exit icon (<http://www.ed.gov/disclaimers/disc.jpg>) shall appear next to each external link or group of links. The icon shall link to the disclaimer statement at <http://www.ed.gov/disclaimers/exit.html>. The following is the standard link and the icon:

<IMG SRC="/disclaimers/disc.jpg" HEIGHT=12
WIDTH=26 ALT="[EXIT]">

DISCLAIMER

To Home Page

Documents should be designed to minimize users' dependence on the navigational aids in WWW clients (e.g., back and forward buttons, history lists). In contrast, site navigation schemes/button bars orient users who arrive at the site through a search engine and help them trace a path through the site.

There should be explicit links on each page within a document or collection back to the home page for that document or collection. The home page for each document or collection should in turn include an explicit link back to the sponsoring organization or program. Each organization and program home page should include an explicit link back to the ED home page.

To E-Mail Addresses

Mailto links will be used to route e-mail to Department mailboxes.

Webmaster

To Download Files

Because http: links require less resources from the server (as opposed to ftp: links), they should be used when linking to a file that will be downloaded to a user's machine. Files for download can be placed in any directory, but should be grouped logically. When choosing a file format, see the File Formats and Large or Complex Documents sections. Links to files larger than 50 kilobytes will include an explicit note of the file size.

Within Text

(Adapted from Sun Microsystems Guide to Web Style)

Write surrounding text so as to help people understand what a link does. Readers pay a time penalty for following a link. Help them understand what value they will receive if they traverse a link.

Adding a link emphasizes the word or phrase containing the link and can make the text more difficult to read. A single word may not be enough, and links that extend for multiple lines may end up confusing the reader about the destination. This example hides the useful destination of the links:

Hairong Li of the Missouri School of Journalism maintains The Internet Advertising Resource Guide, a wide-ranging collection of web commerce references.

This is even worse:

Click here to go to The Internet Advertising Resource Guide.

This is a better passage:

Hairong Li of the Missouri School of Journalism maintains The Internet Advertising Resource Guide, a wide-ranging collection of web commerce references.

Use the default color for links whenever possible. Changing the link color can confuse users who associate “blue” with a link yet to be followed and “red” with a followed link. In addition, because users can change their browser preferences for link and background color, links set to a certain color could disappear into the background.

Cross-links within ED Site

When you add new pages to the main ED web site or another ED-funded site, remove pages, or make significant modifications, please refer to the checklist below to determine whether links should be added, revised, or removed in any of the cross-cutting categories maintained on the main ED web site.

If your information is a ...	Should this page link to it?
major page on a hot topic or subject about which ED receives large numbers of inquiries or web requests	Topics from A to Z < http://www.ed.gov/topicsaz/ > An alphabetical list of 200-300 major topics with links to the best starting points for customers interested in finding information on one of the topics.
major page addressing one or more of the administration's 7 priorities for education	President's and Secretary's Priorities < http://www.ed.gov/inits.html > Links to the major pages that address the 7 priorities.
major page providing information about ED's student aid programs and services	Student Financial Assistance < http://www.ed.gov/finaid.html > Links to the major pages that provide student aid information and services.
research office or ED-funded organization	Research – Offices & Organizations < http://www.ed.gov/stats.html > Links to ED offices, institutes, and funded organizations engaged in education research.
research publication or product	Research – Publications & Products < http://www.ed.gov/stats.html > Links to databases, publications, and other products of ED-funded education research.
significant statistical resource in ED	Statistics

If your information is a ...	Should this page link to it?
outside NCES	<http://www.ed.gov/stats.html> Links to NCES web site and its major features, as well as to other significant statistical resources elsewhere in ED.
news page	News – News from ED <http://www.ed.gov/news.html> Links to pages that present news about ED programs and activities.
ED-sponsored addition or update to the web that you'd like highlighted on the main ED site	News – New on ED's Web <http://www.ed.gov/news.html> and <http://www.ed.gov/News/> Short announcement of significant additions and updates to ED web sites, plus links to similar pages that list additions and updates to individual office and program web sites.
a speech or testimony by the Secretary or other senior ED officials	News – Speeches and Testimony <http://www.ed.gov/Speeches/> Links to selected speeches and Congressional testimony by the Secretary and other senior ED officials.
calendar, event schedule, or upcoming event	News – Events <http://www.ed.gov/news.html> Links to calendars, event schedules, and selected individual event announcements.
news page about grants or other funding opportunities	News about Funding Opportunities <http://www.ed.gov/funding.html> <http://www.ed.gov/GrantApps/> and <http://www.ed.gov/news.html> Links to pages that list news about funding opportunities in individual ED offices and programs.
grant application package	Funding Opportunities in Individual ED Offices and Programs <http://www.ed.gov/funding.html> <http://www.ed.gov/GrantApps/> and <http://www.ed.gov/news.html> Links to grant application packages and kits.
the primary page for an ED program	Guide to U.S. Department of Education Programs <http://web99.ed.gov/GTEP/Program2.nsf> Includes links to pages for individual ED programs.
ED-funded organization that provides information, technical assistance, or other services to the general public or a specialized set of customers	Education Resource Organizations Directory (EROD) <http://www.ed.gov/Programs/ERODmap.html> Contains descriptive and contact info about ED-funded and other organizations that provide information or technical assistance on a national, regional, or state basis.
full-text law, regulation, or policy guidance	Legislation, Regulations, and Policy Guidance <http://www.ed.gov/pubs/legsregs.html> Links to full-text of laws, regulations, and policy guidance documents that pertain to ED.
full-text ED newsletter or periodical	Newsletters and Periodicals from ED <http://www.ed.gov/newsletters.html> Links to newsletters and periodicals published by ED; links are normally established when a new periodical has

If your information is a ...	Should this page link to it?
	established itself with multiple issues.
full-text ED publication	Publications <http://www.ed.gov/pubs/> Links to each ED publication that is available online in full-text; pick appropriate category -- Guides, Resource Directories, Research Syntheses, Publications for Parents, Ed. Research & Practice Reports & Studies, or ED Strategic Plans and Annual Reports.
The primary web page for an ED principal office or regional office	ED Organizational Structure and Offices <http://www.ed.gov/people.html#org> and <http://www.ed.gov/gen_ed_org/> Links to home pages for individual ED Principal Offices and Regional Office.
bio/photo of a senior ED official	People & Offices – ED Organization Overview <http://www.ed.gov/gen_ed_org/> Brief description of each ED principal office with links to bios and photos for office heads and senior staff.
ED-funded Internet site	Other ED-Funded Sites <http://www.ed.gov/EdRes/> Links to each ED-funded site (contractor, grantee, etc.) elsewhere on the Internet.
ED-funded Internet site	Cross-Site Index <http://www.ed.gov/Search/> Indexes full-text content of all known ED-funded web sites to enable customers to search all 150+ sites from a single screen.
database or search service	Search <http://www.ed.gov/search.html> Links to each ED database or other searchable information.
fact sheet or list of frequently asked questions	Frequently Asked Questions (FAQs) and Fact Sheets <http://www.ed.gov/faqs.html> Links to FAQs and fact sheets about ED offices, programs, activities, and initiatives.
ED-sponsored toll-free customer service telephone number	Toll-Free Customer Service Number <http://www.ed.gov/tollfree.html> Lists main toll-free telephone numbers publicized by ED for customer service, with descriptions to help guide customers to the proper number for their needs.
e-mail address publicized and used for outside customers to contact an ED office, program, or service	Customer Service E-mail Addresses Internet Working Group maintains a current list of customer service e-mail addresses, the individuals responsible for each, and the approximate weekly volume.
award or other recognition received by an ED-funded web site or service	Awards <http://www.ed.gov/Awards/> Lists awards and recognition received by ED-funded web sites and services.

Dead Links

Dead links inevitably occur on WWW servers as pages are modified, moved, or deleted over time. However, dead links can quickly damage a WWW server's credibility. The ED Webmaster and the Home Page Editor(s) will be jointly responsible for monitoring and maintaining their collections. They

shall correct or remove dead links as soon as possible. The ED Webmaster routinely runs an automated checker and corrects dead links.

When changing URLs on ED servers, coordination may be required with external servers which point to those URLs. The technology to facilitate such coordination is not yet mature but is emerging.

Style/Markup

Titles

Every page will have a unique title. The title will be as short as possible but fully informative and specific (e.g., "FY 1996 ED Budget" is preferable to "Budget"). Although the title is often overlooked because it does not appear in the body of the document, it is important because it is frequently used to identify the document on hotlists, search result sets, and site indexes.

```
<HEAD>
<TITLE>FY 1996 ED Budget</TITLE>
</HEAD>
```

Headers

Every page will have a top-level <H1> header or equivalent graphic banner with ALT text near the top of the first screen, except that an <H2> header may be used for continuation pages when a chapter or section is subdivided. The header should not exceed 1-2 lines of text.

Documents which are divided into multiple pages will include the document title and publication date in italics above the top-level header, to help identify the document to users who may arrive at the page without knowing its context, (e.g., the result of a full-text search).

Lower-level headers (e.g., <H2>, <H3>, etc.) may be used if appropriate to the document. Header markup will not be used to emphasize entire paragraphs. Generally, section titles and other text marked with the Subhead style in a word-processing document should be marked up as lower-level HTML headers instead of simply appearing in bold.

A graphic with ALT text may act as a header. Other HTML headers used on the same page should take into account the relative size of the graphic and be sized accordingly. For example, a graphic banner might replace the top level <H1> on a page; therefore, any HTML headers used below it would be <H2> and smaller.

Additional text formatting tags (bold, italic, etc.) should not be applied to headers because they can confuse some browsers (like Lynx). Most browsers default to bold to display headers anyway. Centering the headers is OK.

Standard Footer

Every document will contain the following information in a standard footer, separated from the body of the page by a horizontal rule: last update date, e-mail address or initials of responsible party with [mailto:](#) link, and link to an appropriate home page (for the document, collection, project, program, organization, or Department).

```
<A HREF="/index.html"><IMG SRC="/icons/EDhome.gif" alt="[ Go to
ED Home Page ]"></A>
<P><EM>This page last modified January 1, 1998 (<A
HREF="mailto:webmaster@inet.ed.gov">jd</A>).</EM>
```

Standard Icons






Wherever an icon is used for the main ED home page, it shall be the standard icon EDhome.gif. This text string/URL should be used to display it (with a link) for files on the main ED WWW server:

```
<A HREF="/index.html"><IMG SRC="/icons/EDhome.gif"  
ALT="[ Go to U.S. Department of Education WWW Home Page ]"  
WIDTH=39 HEIGHT=33></A>
```

or, for files on other servers:

```
<A HREF="http://www.ed.gov/"><IMG SRC="http://www.ed.gov/icons/EDhome.gif"  
ALT="[ Go to U.S. Department of Education WWW Home Page ]" WIDTH=39  
HEIGHT=33></A>
```

See the <http://www.ed.gov/icons/> directory for additional general purpose icons, including navigational buttons and various bullets and horizontal rules. Pages on the main ED WWW server shall use the standard icons for navigational buttons through standard references:

Icon	Use	Location	Width	Height
	Previous: goes to top of previous logical page	/icons/prev.gif	31	32
	Up: returns to higher level page, usually a table of contents or menu list	/icons/up.gif	31	32
	Next: goes to top of next logical page	/icons/next.gif	31	32
	Top of page: goes to top of current page	/icons/top.gif	31	22
	ED Home: goes to ED home page	/icons/EDhome.gif	39	33

Several versions of the ED seal are available in the main ED icons directory. A current list is available at <http://www.ed.gov/icons/edseals.html>.



Offices and programs are encouraged to develop graphic banners and icons to help give a graphical identity and consistent look-and-feel to their pages, within the guidelines defined below for sensible and economical use of graphics.

Images

Images will not be used for pure decoration. Images are appropriately used to help convey information or to create a consistent and recognizable “look and feel” for a collection.

Images will be as small as possible. As a general rule, images should be no wider than 480 pixels, in order to display on the typical Web browser’s 500 pixel wide viewing window on a 640 by 480 monitor. Image file size can often be reduced significantly by reducing the color depth, especially for non-photographic material such as charts and graphs. Image resolution may often be reduced without compromising the information conveyed. The interlacing technique, while it may slow overall download time, provides users with something to see (increasing levels of detail) as the full image gradually fills in. Actual width and height should be specified for each image; many browsers can use the information to format and display documents faster.

Text graphics and logos will be anti-aliased to avoid jagged outlines. Anti-aliasing is a graphic design technique to work around the low resolution of the computer monitor and make objects appear as smooth as if they had been printed. GIF graphics generally benefit from this technique; JPEGs do not.

ALT text will accompany images to make the image content available to users with text-only or screen-reading browsers. Where possible, it should express the same content as the image, for example:

```
<IMG SRC="title3.gif" ALT="Completing the Verification Process">
```

It may not be feasible to capture in ALT text all of the information in a graphic, such as a complex chart created as a GIF. The web publisher must decide, based on knowledge of the target audience, whether the information in the graphic is integral (and should be prepared in an alternative accessible format) or whether it plays a supporting role (and a description is sufficient):

```
<IMG SRC="sardl.gif" ALT="[Pell deadline graphic]">
```

When maximum accessibility is a concern for tabular data or images, consider the <PRE> tag. <PRE> can be used in conjunction with the ALT attribute inside an tag to offer an alternative source for complex graphical charts. Create an ASCII version of the chart and place it within the ALT attribute of the tag; then place a <PRE> tag before and a <PRE> tag after the tag to ensure the data displays properly.

If the ALT text for a navigational graphic would duplicate linked descriptive text, the ALT text should be left blank.

```
<A HREF="index.html"><IMG SRC="up.gif" ALT="">Up</A>
```

When both an image and descriptive text are linked to the same page, one link should encompass both. Some HTML editors link each separately; thus, some text browsers would read the link twice.

Client Feature Variations

Document authors should be aware of the variations in features available on different clients (Web browsers) and should author their documents accordingly. For example, before using <TABLE> markup, the author should be aware that Lynx does not fully support table markup and renders most tables as unreadable strings of text. Knowing that, the author may decide to use <PRE> markup, which is less powerful but permits Lynx users to view tables narrower than 80 columns.

In general, there is substantial variation among clients in their interpretation of the HTML standard for newer, more complex features such as forms and even in some simple spacing elements such as <P>,
, <HR>, and .

Client-Specific Markup

Avoid using client-specific markup. WWW pages produced by ED must be usable by all major clients to ensure equitable access to the information. It is not acceptable to mark up a document in such a way as to enhance its elegance when viewed by one browser while degrading its usability under other browsers. For example, it is permissible to use the Netscape-specific tag to enlarge the initial letters of paragraphs because it does not interfere with the display of the same document by another browser which does not recognize it. On the other hand, the and other Netscape-specific HTML extensions can be used in other ways which make the document difficult to read using any browser other than Netscape. Such use is prohibited.

Style

The use of logical tags is preferable to physical tags. The function of logical tags is controlled by the browser, whereas physical tags define the appearance of text/images for all browsers.

Logical tag examples:

- for emphasis, normally displays text in italics
- for stronger emphasis, normally displays text in bold

Physical tag examples:

<I> displays text in italics

 displays text in bold

Other HTML tags can produce similar effects, such as <CITE> for italics, but should only be used for their intended purpose. For instance, <CITE> is designed for bibliographic notations and publication titles; other uses will confuse indexers. The tag should be used for other italic type.

The <P> tag is preferable to the
 tag when marking paragraph returns. <P> automatically inserts a blank line before the next text block. Because
 simply moves text to the next line, it should be used for single spacing, such as to end text-wrapping around a graphic. Note that although the use of multiple
 tags will create white space in some browsers, it does not do so in all.

Formatting tags and links should not contain extra spaces. (Some HTML editors add extra spaces.) In some browsers, like Lynx, formatting is displayed as underlining, and extra spaces will be underlined also. Many browsers display linked text as underlined, and extra spaces can show up as underlined also.

Color

To standardize pages for the majority of users, design for average 8-bit monitors. While both Macintosh and Windows platforms display a 256-color palette, they aren't the same 256 colors. The two platforms only share 216 colors. To achieve consistent color presentation across platforms, employ colors from those shared 216 colors.

To optimize pages for users with visual disabilities, keep the number of colors to a minimum and use color combinations that offer high contrast.

When designing pages that specify table cell background colors, designers should ensure that the pages are readable by older browsers that do not recognize this formatting. Avoid text colors that cannot be read against the overall page background color, such as yellow text on a white background.

Yahoo maintains a directory of sites on color information

(http://www.yahoo.com/Computers_and_Internet/Internet/World_Wide_Web/

Page_Design_and_Layout/Color_Information) with sample web-safe 216 color palettes and help with color conversion.

Considerations for Users with Disabilities, Character-only, or Low-Bandwidth Access

Pages will be designed so that there is a text equivalent for all information contained in graphics. For example, an image map must be accompanied by text links that provide access to the complete set of options for users who cannot use the image maps because of disabilities, character-only browser limitations, or low-bandwidth connections.

Page designers must put themselves in the place of a visually impaired user and design pages that make sense (e.g., use "*" instead of "Blue Star" as the ALT tag for a blue star used as a list bullet). See additional guidance on ALT text in the Images section.

Place a dividing character between links that occur consecutively. Vertical bars flanked by a space are often used to prevent a list of links from being read as one long link by a screen reader.

Pages will be tested using Lynx or another character-only browser. Page accessibility will be validated using Bobby (<http://www.cast.org.bobby/>).

Pages will be designed for efficient transfer over low-bandwidth connections, which are still prevalent in schools, homes, and libraries. Graphics will be no larger than necessary and may sacrifice color-depth or image resolution to reduce file size.

Online interactive forms should not replace other options. Designers will provide an alternative, such as a form to download, fill out, and mail in.

Tables

Tables, like images, can be an extremely effective way to present information. However, also like images, they can hamper access to information by visually impaired individuals or those with character-only browsers. <TABLE> markup should be used when it significantly enhances the effectiveness of information presentation. It should be accompanied if possible by an alternative presentation, such as a text-only version, for those whose browsers or disabilities prevent them from using table markup. An appropriate use of <TABLE> markup would be to present a statistical table, accompanied by a version of the same information as preformatted text (<PRE>) 80 or fewer characters in width. In some cases (e.g., the *Digest of Education Statistics* with its more than 400 tables, many of which are quite wide) it may not be feasible to prepare each table in two formats. The designer must decide which format to prepare based on knowledge of the target audience.

Frames

Designing web pages with frames enables the display of multiple scrollable panels on a single screen, each with its own distinct URL. Frames divide web pages into separate regions that can display content independently. However, frames present navigation and accessibility problems. They typically don't work as well on low-resolution screens because the content must be compressed into smaller frames. And because they require multiple page loads, they can also increase download time. If after a careful consideration of these problems, a web publisher chooses to employ frames, an alternative accessible non-frames version will be required, both as a default for browsers that do not support frames and as a prominent link users may choose from the frames version.

Animation

Animation, like color, is a powerful attention-getter. It should be used sparingly on web sites to emphasize high-priority items.

There are a number of formats/languages for creating online animation, including animated GIFs; Shockwave or Flash; Java; and JavaScript. The first, animated GIFs, are simple to create with freeware and do not require browser plug-ins to view. Shockwave and Flash (formerly FutureSplash) animations require proprietary technology to create and plug-ins to view. Neither is currently recommended for use on the ED site, but will be re-evaluated. Java is a computer programming language that allows web publishers to add interactivity to web sites. It can open and access objects across the web via URLs, is architecturally neutral, and runs in a secure environment. As an emerging standard, it is popular but not universally accessible. Finally, JavaScript is a scripting language created by Netscape that works on a subset of Java commands. While easier to learn and manipulate than Java, its full syntax can only be read by Netscape 3.0 clients and above.

Web publishers who wish to incorporate animation should discuss the options with the ED Webmaster.

Accuracy/Code Checking

After a document has been marked up but before it is made publicly available, the spelling and syntax should be checked, and the links should be verified. HTML converters can insert unnecessary code when converting or marking up a document. Because reading duplicate or unneeded code can increase file size and slow file loading, web publishers should give their documents a "cleaning" before they are posted. The following unnecessary codes may be inserted by HTML editors and can be removed:

NATURALSIZESIZEFLAG=x
wp=1 within the
 tag
wp=2 within the
 tag
consecutive (The editor may have been trying to approximate an alignment in the word processing version.)

other empty codes, such as `` (However, be careful not to delete anchors, which do not have to flank text.)

Many HTML converters include unnecessary FONT FACE, SIZE, and COLOR specifications, especially in table markup, which can dramatically reduce file size when they are removed. Syntax can be checked using an HTML validation tool such as the WebTechs HTML Validation Service (<http://valsrc.webtechs.com>). A number of spell-checkers exist on the Internet including WebSter's Dictionary (<http://www.goldendome.net/Tools/WebSter/>). One tool that combines both functions is Doctor HTML (<http://www2.imagiware.com/RxHTML>).

Another good tool, Bobby, checks for accessibility and browser compatibility problems (<http://www.cast.org/bobby/index.html>). Additional checkers can be found in the Yahoo directory at (http://www.yahoo.com/Computers_and_Internet/Information_and_Documentation/Data_Formats/HTML/Validation_and_Checkers).

File Transfer and Posting

Adding New Files

Provide two (2) hard copies and a disk containing an electronic version to either the OCIO point-of-contact or the ED Web Contractor (if the principal office works directly with the contractor). One hard copy must be high quality if the cover or any graphics need to be scanned. Otherwise, quality must be sufficient to verify accuracy of markup. IBM floppy disks are preferred. Some other disk formats, such as Zip, Jaz, and SyQuest, are acceptable; check with the OCIO point-of-contact before sending.

To speed posting, provide documents in HTML or in software formats that the contractor can convert quickly to HTML (e.g., WordPerfect, Microsoft Word, ASCII, GIF, JPEG, Harvard Graphics, Freelance, PowerPoint) rather than page layout or less common proprietary formats (e.g., Quark Express, Ventura Publisher, Pagemaker, Tex). If your files are in specialized formats, you may be asked to convert them to a format with which the contractor can work.

Make sure the file(s) on the disk match the printed version, including any last-minute changes made at the printer, and are complete. This is important. The version on the disk is the version that will appear online. Spell-check and complete any other editing before submitting.

Identify the document and software format on the disk label. If the disk includes multiple files, indicate which files correspond to which portions of the document. If files aren't available for portions of the document, say so and explain whether the missing portions can be omitted from the web version. Include a plain text "readme" file on the disk in complex cases.

Provide clear instructions stating exactly where the document should be added, including the URL(s) (<http://.....>) from which it should be linked. If you're not sure, discuss it with your office's Home Page Editor. Include a short blurb for a "What's New" announcement if appropriate; indicate the text that should be linked by enclosing it in [corner brackets].

Virus check disks before sending.

As an alternative to disks, electronic files may be sent as cc:Mail attachments. The message should clearly identify the document and software format, itemize if multiple files, and include instructions for placement, links, and "What's New" text if appropriate.

Electronic files may be sent directly from a publishing contractor to the ED Web Contractor using FTP (File Transfer Protocol) by arrangement with the ED Web Contractor through the OCIO point-of-contact.

Create and include an Adobe Acrobat PDF file if you want to offer that format on the web. Although it is possible for the ED Web Contractor to create PDF files, more accurate results (e.g., pagination, tabstops, etc) are usually obtained when the PDF file is produced in conjunction with the printed version. PDF files larger than 500k should be divided into sections if possible.

Changing or Updating Files

When additional text is to be added to an online file, it is usually more efficient to submit only the additional text along with instructions for placement, rather than sending a new document to be marked up from scratch.

When a new edition of a publication closely resembles a previous version that is already marked up and online, it is sometimes more efficient to revise the marked up version than to start the markup from scratch for the new version. In such cases, take care to maintain the integrity of the HTML markup when changing or adding material.

When a publication is replaced or updated with a new version, provide guidance as to whether to discard the old version or keep it online for archival or reference purposes. It is helpful to know when a publication is initially placed online if it will be replaced or updated in the future, so that directories can be set up appropriately.

If you make the changes to the HTML version yourself, download the current version of the file from the ED server to use as your starting point rather than working from the version on your hard disk.

When updating a page, make sure to update the last update date and initials of the individual performing the update which appear at the bottom of many pages.

Priorities and Scheduling

Normally, documents are handled on a first-in/first-out basis.

Short simple text-only documents (20 pages or less) can usually be processed within 5 working days.

Longer, more complex documents take longer to prepare; documents over a hundred pages with extensive charts, figures, tables, or sidebars may take as long as a month or more for the contractor to mark up, depending on how much work is in the queue.

Simple changes and additions of small amounts of text to existing pages can usually be processed within 2-3 working days.

Some document types, such as press releases and Federal Register documents, are routinely given high-priority attention because the Department has committed to putting such materials on the web site within 24 hours.

Allow time for documents to be staged for review in the site's testing area in order to verify links and page appearance. The contractor can make minor edits to correct spelling and links at this stage. The testing area is secured against off-site access. Arrangements can be made to permit access to test files by off-site reviewers.

If your files need to be given higher priority than normal, state the need (e.g., need to coordinate with press release or news conference, URL published, application deadline, etc.) to your office's home page representative. We will make every attempt to accommodate reasonable priorities. However, please be aware that if everything is marked high priority, then in truth nothing is.

References

Federal Guidelines

World Wide Web Federal Consortium Home Page Guidelines and Best Practices
<http://skydive.ncsa.uiuc.edu/cybrary/2/guidelines>

Guidelines for Establishing and Maintaining a Department of Defense Web Information Service
<http://www.dtic.mil/defenseink/webguide.html>

Other HTML Style Guides and Standards

Putting Information onto the Web
A collection of documents on authoring hypertext
<http://www.w3.org/pub/WWW/Provider/Overview.html#author>

Composing Good HTML
Eric Tilton
<http://www.cs.cmu.edu/~tilt/cgh>

Sun Guide to Web Style
Sun Microsystems
<http://www.sun.com/styleguide>

Introduction to HTML and URLs
Ian Graham, University of Toronto
<http://www.utoronto.ca/webdocs/HTMLdocs/NewHTML/intro.html>

Yale C/AIM Web Style Guide
Patrick J. Lynch, Yale Center for Advanced Instructional Media
<http://info.med.yale.edu/caim/manual/index.html>

Names and Addresses, URIs, URLs, URNs, URCs
A collection of documents about web addressing schemes
<http://www.w3.org/pub/WWW/Addressing>

Accessibility

Electronic and Information Technology Accessibility Standards (36 CFR Part 1194)
Architectural and Transportation Barriers Compliance Board (Access Board)
<http://www.access-board.gov/news/508-final.htm>

ED/OCIO Requirements for Accessible Electronic and Information Technology (E&IT) Design
U.S. Department of Education Office of the Chief Information Officer
<http://ocfo.ed.gov/coninfo/clibrary/software.htm>

Unified Web Site Accessibility Guidelines
Trace R&D Center, University of Wisconsin–Madison
http://www.trace.wisc.edu/docs/html_guidelines/htmlgide.htm

Writing Accessible HTML Documents
Paul Fontaine, GSA Center for Information Technology Accommodation
<http://www.itpolicy.gsa.gov/coca/wwwcode.htm>

Design

The Web Developer's Virtual Library

A collection of design tips and sites
<http://www.stars.com>

Creating Graphics for the Web
Discussion of anti-aliasing technique
<http://www.widearea.co.uk/designer/anti.html>

Creating Killer Web Sites
Design tips excerpted from David Siegel's best-selling book
<http://www.killersites.com/1-design>

DMS Guide to Web Color: Palettes and Gamma
<http://www.oit.itd.umich.edu/projects/DMS/answers/colorguide>

Web Design Group
Advice on non-browser, non-resolution specific design
<http://www.htmlhelp.com>

Web Page Design for Designers
Non-technical guidance on web design, discussion forum
<http://www.wpdfd.com/wpdhome.htm>

Bandwidth Conservation Society
Tips for optimizing web page delivery
<http://www.infohiway.com/faster/index.html>

Security

The World Wide Web Security FAQ
Lincoln D. Stein
<http://www.w3.org/Security/Faq/>

Validation

Yahoo HTML Validation and Checkers
http://www.yahoo.com/Computers_and_Internet/Information_and_Documentation/Data_Formats/HTML/Validation_and_Checkers

WebTechs HTML Validation Service
HTML validation tool
<http://valsrc.webtechs.com>

WebSter's Dictionary
Forms-based spell checker for HTML documents
<http://www.goldendome.net/Tools/WebSter/>

Doctor HTML
Web page analysis tool
<http://www2.imagiware.com/RxHTML>

Bobby
Center for Applied Special Technology
Web page analysis tool for disability access and browser compatibility
<http://www.cast.org/bobby/index.html>

VIII.B. Document Submission Policy and Procedures

This document defines the steps for getting documents posted to the U.S. Department of Education World Wide Web site.¹

- I. Documents that are not yet marked up, are available in one of the formats specified in the ED standards & guidelines, and may require format conversion prior to markup.²
 - 1) POC Home Page Editor submits documents to be placed on WWW or Gopher servers to OCIO point-of-contact with a completed copy of "Request to Post Files on ED WWW Site" form (see attached copy). OCIO point-of-contact³ examines request and may suggest alternative formats, additional links, etc. to office point-of-contact.
 - 2) OCIO point-of-contact forwards files to the ED Web Contractor.⁴ In cases where the COTR for the ED WWW site contract has authorized direct communication, designated POC web publishers can forward files directly to ED Web Contractor for markup.
 - 3) ED Web Contractor receives document file(s), performs any necessary conversion, markup, and formatting, and creates any accompanying graphics or alternate format versions (e.g., PDF).
 - 4) ED Web Contractor posts document to test area on server after spell-checking document, verifying links, and checking adherence to ED WWW Technical Standards, part of the overall Policy and Procedures, and site conventions.⁵
 - 5) POC Home Page Editor and COTR or designated representative review document in test area and provide feedback to ED Web Contractor.
 - 6) ED Web Contractor makes any changes/corrections and advises POC Home Page Editor and COTR or designated representative that files are ready for final review.
 - 7) When POC Home Page Editor indicates files are acceptable, COTR or designated representative approves migration of document to live site.

Note: Posting to test area (i.e., part of Step 4 and Steps 5-7) may be skipped in circumstances where COTR or designated representative directs that time-sensitive documents be posted directly to live site.

- 8) ED Web Contractor migrates document to live site.
- 9) ED Web Contractor notifies POC Home Page Editor and COTR or designated representative.

¹ These procedures will be incorporated in the U.S. Department of Education World Wide Web Server Policy and Procedures (<http://www.ed.gov/internal/wwwstds.html>). The proper handling of files depends upon their source and format. Procedures for preparation and posting ongoing, time-sensitive types of documents, such as Federal Register notices, press releases, testimony, and Dear Colleague letters may be arranged by mutual agreement between the providing office and the COTR.

² Submission by FTP, email attachment, or 3.5" floppy disk is preferred. Avoid SyQuest cartridges, Jaz and Zip drives, magnetic tape, etc.

³ A primary and backup OERI point-of-contact is assigned to each ED principal office (see attachment).

⁴ Current ED Web Contractor is Allied Technology Group, Inc. (ATG).

⁵ ED Web Contractor makes simple corrections and consults with OCIO points-of-contact and POC Home Page Editors as necessary on more complex changes. ED Web Technical Standards contact is consulted to clarify or determine applicability of standards and guidelines as necessary.

II. Documents that are already marked up by office personnel, consultants, and contractors other than the primary contractor should be forwarded to the designated OCIO point-of-contact.

- 1) POC Home Page Editor submits documents to be placed on WWW or Gopher servers to OCIO point-of-contact with a completed copy of "Request to Post Files on ED WWW Site" form (see attached copy). OCIO point-of-contact examines request and may suggest addition of alternative formats, additional links, etc. to office point-of-contact.
- 2) OCIO point-of-contact forwards files to ED Web Contractor. In cases where the COTR for the ED Web Contractor contract has authorized direct communication, designated POC web publishers can forward files directly to ED Web Contractor.
- 3) ED Web Contractor posts document to test area on server after spell-checking document, verifying links, and checking adherence to ED WWW Technical Standards, part of the overall Policy and Procedures, and site conventions.⁶
- 4) POC Home Page Editor and COTR or designated representative review the document in test area and provide feedback to ED Web Contractor.
- 5) ED Web Contractor makes any changes/corrections and advises POC Home Page Editor and COTR or designated representative that files are ready for final review.
- 6) When POC Home Page Editor indicates files are acceptable, COTR or designated representative approves migration of document to live site.
- 7) ED Web Contractor migrates document to live site.
- 8) ED Web Contractor notifies POC Home Page Editor and COTR or designated representative.

Note: In order to maintain site standards, these documents will always be posted to a test area for review prior to being placed on the live site. COTR and ED Web Contractor representative will make every attempt to expedite postings. However, as a general rule, quality assurance must take precedence over expediency.

III. Minor changes or corrections to existing files and directories on the ED WWW site.

- 1) POC Home Page Editor submits a completed copy of "Request to Post Files on ED WWW Site" form (see attached copy) describing required change to OCIO point-of-contact.
- 2) OCIO point-of-contact forwards request to ED Web Contractor. In cases where the COTR for the ED WWW site contract has authorized direct communication, designated POC web publishers can forward minor change/correction requests directly to ED Web Contractor.
- 3) ED Web Contractor posts changed/corrected document to a test area on server after spell-checking document, verifying links, and checking adherence to ED WWW Technical Standards, part of the overall Policy and Procedures, and site conventions.⁷
- 4) POC Home Page Editor and COTR or designated representative review document in test area and provide feedback to ED Web Contractor.

Note: Posting to test area (i.e., part of Step 3 and Step 4) may be skipped in circumstances where COTR or designated representative directs that time-sensitive documents be posted directly to live site.

- 5) ED Web Contractor makes any required changes/corrections and migrates document to live site.
- 6) ED Web Contractor notifies POC Home Page Editor and COTR or designated representative.

⁶ ED Web Contractor makes simple corrections and consults with OERI points-of-contact and POC Home Page Editors as necessary on more complex changes. ED Web Technical Standards contact is consulted to clarify or determine applicability of standards & guidelines as necessary.

⁷ ED Web Contractor makes simple corrections and consults with OERI points-of-contact and POC Home Page Editors as necessary on more complex changes. ED Web Technical Standards contact is consulted to clarify or determine applicability of standards & guidelines as necessary.

VIII.C. Request to Post Files on ED WWW Site

POC/Office:

Home Page Editor:

Phone:

Scope of Work:

- ☐ create new web pages from source documents
 - provide 1 copy of electronic files
 - provide 2 hardcopies if not simple text
 - state any special instructions -- e.g., create PDF, omit graphics
- ☐ review, edit, and post new HTML pages already developed in-house
- ☐ replace, revise, or add web pages to existing collection
- ☐ other (please explain)

Target Date for Posting:

(explain if embargoed, required for press conference or other event):

Priority Level:

- ☐ Urgent
- ☐ Normal

Announcement:

- ☐ What's New on ED Web (provide 1-2 sentence blurb)
- ☐ News -- Events
- ☐ News -- Funding Opportunities
- ☐ Candidate for EDInfo or Pick of Month
- ☐ Need URL in advance for publication or press release (specify date)

Recommend cross-link to other sections of ED WWW:

- ☐ Publications (specify category)
- ☐ Topics A-Z
- ☐ Directories
- ☐ Frequently Asked Questions and Fact Sheets
- ☐ Testimony or Legislation
- ☐ Other (specify)

Date for File(s) to be Removed, Archived, or Updated and Action to be Taken:

URL of Posting:

Introductory Text (if applicable):

Links to Other Web Pages/Location(s):

Additional instructions:

POC Approval for Publication:

Name:

Date:

OPA Approval Needed: Yes No

Name:

Date:

Note: This request for posting provides authorization that the materials referenced herein have been officially approved for posting by the responsible point-of-contact and the organization referenced above.

VIII. D. Contacts

Technical Standards & Guidelines: Keith Stubbs -- (202) 401-6014

ED WWW Site Contractor (ATG): Ed Loeb -- (301) 315-9200 x3302

OCIO/INet Principal Office Points-of-Contact (as of November 2001)

Office	Primary Contact		Backup Contact	
	Name	Phone	Name	Phone
OBEMLA	Joyce Benton	401-3750	1. Sharon Robinson 2. Gloria Eldridge	401-3983 401-3811
OCFO	Gloria Eldridge	401-3811	1. Lynn Harding 2. Sharon Robinson	708-6030 401-3983
OCIO	Gloria Eldridge	401-3811	1. Elaine Goheen 2. Sharon Robinson	401-6672 401-3983
OCR	Lynn Harding	708-6030	1. Paul Horn 2. Jennifer Reeves	401-3968 260-1140
OS/ODS/OUS	Jennifer Reeves	260-1140	1. Shelia Hamblin 2. Paul Horn	205-2140 401-3968
OERI	Jennifer Reeves	260-1140	1. Shelia Hamblin 2. Paul Horn	205-2140 401-3968
OESE	Elaine Goheen	401-6672	1. Sharon Robinson 2. Shelia Hamblin	401-3983 205-2140
OGC	Gloria Eldridge	401-3811	1. Sharon Robinson 2. Joyce Benton	401-3983 401-3750
OIG	Lynn Harding	708-6030	1. Joyce Benton 2. Elaine Goheen	401-3750 401-6672
OIIA	Paul Horn	401-3968	1. Shelia Hamblin 2. Lynn Harding	205-2140 708-6030
OLCA	Paul Horn	401-3968	1. Sharon Robinson 2. Joyce Benton	401-3983 401-3750
OM	Joyce Benton	401-3750	1. Sharon Robinson 2. Gloria Eldridge	401-3983 401-3811
OPA	Sharon Robinson	401-3983	1. Lynn Harding 2. Gloria Eldridge	708-6030 401-3811
OPE	Lynn Harding	708-6030	1. Joyce Benton 2. Elaine Goheen	401-3750 401-6672
OSERS	Paul Horn	401-3968	1. Shelia Hamblin 2. Lynn Harding	205-2140 708-6030
OSFAP	Joyce Benton	401-3750	1. Gloria Eldridge 2. Jennifer Reeves	401-3811 260-1140
OVAE	Elaine Goheen	401-6672	1. Sharon Robinson 2. Shelia Hamblin	401-3983 205-2140

OCIO/INet Points-of-Contact for Recurring Information and Tasks

Info/Task	Primary Contact		Backup Contact	
	Name	Phone	Name	Phone
Discussion ListServes	Paul Horn	401-3968	Sharon Robinson	401-3983
ED & WH Press Releases	Sharon Robinson	401-3983	Gloria Eldridge	401-3811
ED Initiatives	Sharon Robinson	401-3983	Joyce Benton	401-3750
ED Publications in ERIC	Keith Stubbs	401-6014	Gloria Eldridge	401-3811
Education Resource Organizations Directory (EROD)	Keith Stubbs	401-6014	Gloria Eldridge	401-3811
ERIC Digests	Keith Stubbs	401-6014	Gloria Eldridge	401-3811
Federal Register	Sharon Robinson	401-3983	Joyce Benton	401-3750
FREE Web Site	Gloria Eldridge	401-3811	Keith Stubbs	401-6014
Reports and Studies	Shelia Hamblin	205-2140	Keith Stubbs	401-6014
Senior Staff Biographies	Sharon Robinson	401-3983	Lynn Harding	708-6030
SFA Advisory Committee	Gloria Eldridge	401-3811	1. Lynn Harding 2. Sharon Robinson	708-6030 401-3983
Site Awards	Keith Stubbs	401-6014	Paul Horn	401-3968
Testimony & Speeches	Sharon Robinson	401-3983	Lynn Harding	708-6030
Topics A-Z	Shelia Hamblin	205-2140	Keith Stubbs	401-6014